

~~Addendum~~

General Dynamics Corporation Shipyard
Outfitting Pier 3 (Pier 3S)
97 East Howard Street
Quincy/~~Braintree~~
Norfolk County
Massachusetts

HAER No. MA-26-D

HAER
MASS
11-QUI,
10D-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
MID-ATLANTIC REGION, NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR
PHILADELPHIA, PENNSYLVANIA 19106

HISTORIC AMERICAN ENGINEERING RECORD

~~Addendum to~~

GENERAL DYNAMICS CORPORATION SHIPYARD

Outfitting Pier 3 (Pier 3S)

HAER No. MA-26-D

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MASS
11-QUI,
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Location: 97 East Howard Street at Fore River, Quincy/Braintree, MA. Bounded by East Howard Street (west), Quincy Avenue (south), Weymouth Fore River (east), South Street, Washington Street, and Fore River Bridge (north). Property lies in the cities of Quincy and Braintree, Norfolk County, Massachusetts.

USGS Weymouth, MA Quadrangle, Universal Transverse Mercator
Coordinates: A: 19.337470.4678320
B: 19.337390.4678130

Date of Construction: 1942/43

Present Owner: Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, Massachusetts 02129

Present Use: Vacant

Significance: Constructed in 1942/43, Pier 3 is significant as an integral component of the Quincy-Fore River Shipyard facilities from the World War II period until the closing of the yard in 1984. Fitting out is the last phase of ship construction prior to sea trials and completes the work begun in the basins, slips, and fabrication areas. The pier's structure includes elements of traditional timber pile and earth fill construction methods and later steel pile marine engineering techniques.

Project Information: This documentation was undertaken in June/July 1989 by the Massachusetts Water Resources Authority (MWRA) in accordance with a Memorandum of Agreement. Portions of the Shipyard will serve as a staging area and shipping point during construction of sewage treatment facilities on Deer Island in Boston Harbor and for other water supply and waste-treatment related activities.

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Preparer:

Virginia A. Fitch
The Public Archaeology Laboratory, Inc.
387 Lonsdale Avenue
Pawtucket, RI 02860
(401) 728-8780

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Description

Outfitting Pier 3 of the General Dynamics Corporation/Quincy-Fore Shipyard is located in the north east waterfront section of the shipyard. It is oriented parallel to the Fore River and extends from the northeast corner of the No. 6 Assembly Basin North Platen north to and across the east end of Outfitting Pier 2. It is the only major waterfront shipbuilding structure oriented in this manner. The upland area to the west is filled land, formerly a wet basin.

Constructed in 1942/43, Pier 3 is 560 feet by 40 feet. The northeast corner is laid out at an acute angle of 70 degrees. Its structural system consists of 108 timber transverse beams, or bents spaced 5 feet apart with 1.25 inch piles spaced 2.75 inches on center, 8x12 inch splined timber sheet piling along the west inshore edge, and a 6x12 inch timber lower deck. This substructure supports two 6.75-foot-wide, 10-feet-high tapered, reinforced concrete crane rail foundations. The area between the foundations contains earth fill. The pier deck, at elevation 15.25 feet, is asphalt. Five groups of timber piles support a 21-inch-wide wood plank utilities service catwalk. A clamp timber and concrete fender structure protects the northeast corner.

The asphalt pier deck covers 21,500 square feet and was designed to carry loads of 500 lbs per square foot. Utilities located along the outshore (east) side of the pier's surface included 4 inch steam pipe, 2.5 inch industrial water, 1.5 inch and 4 inch metered water, 4 inch air and 65 V.D.C., 440 V.A.C., 250 V.D.C., and 180 CY.-230 V.A.C. electrical (Yard Plans 1943). A wooden plank box structure encloses the electrical lines for the full length of the pier, inshore of bollards and the other utilities. Double tracks for 15-ton Dravo Revolving Cranes (Structure 22S, see HABS No. MA-26-F) run the full length of the pier. The rails are marked "104-CR OH BS CO. STEELTON 1942". From the time of Pier 3's construction in 1942 until circa 1958, a single Dravo Crane operated on the pier. The second crane, identical to the existing crane, was relocated here when the north ways were demolished and replaced with assembly basins.

Historical Significance

Outfitting Pier 3 is the third oldest of what came to be a total of four outfitting piers at the Quincy-Fore Shipyard. Its significance lies primarily in its role in shipbuilding as an integral component of the assembly and outfitting processes. It functioned as such under General Dynamics Corporation ownership from 1942 to 1984.

In the final outfitting phase of construction, the quality of previous work was checked, deck elements, deck paint and interior mechanical elements and finishes were installed, and the main and auxiliary propulsion machinery were usually tested prior to sea trials (Arnott 1955). Throughout the latter more than forty years of the shipyard's history as one of the leading private shipyards in the United States numerous military and merchant vessels were outfitted at Pier 3.

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Bibliography

Arnott, David, editor

Design and Construction of Steel Merchant Ships. New York: The Society of Naval Architects and Marine Engineers, 1955.

Bethlehem Steel Company

Yard Plans Sheets 4, 4A, 1943.

Boston Affiliates, Inc.

Quincy-Fore River Shipyard Historic Resources Survey and Addendum. Prepared for the Massachusetts Water Resources Authority, October 20, 1988 and January 2, 1989.

General Dynamics Corporation

File Records located at Shipyard, 1964-1984.

General Dynamics Corporation

Yard Plans Sheets 4, 4A, 1943 revised to 1978.

[Note: For archival and additional sources, see Addendum to General Dynamics Corporation Shipyard HAER No. MA-26.]

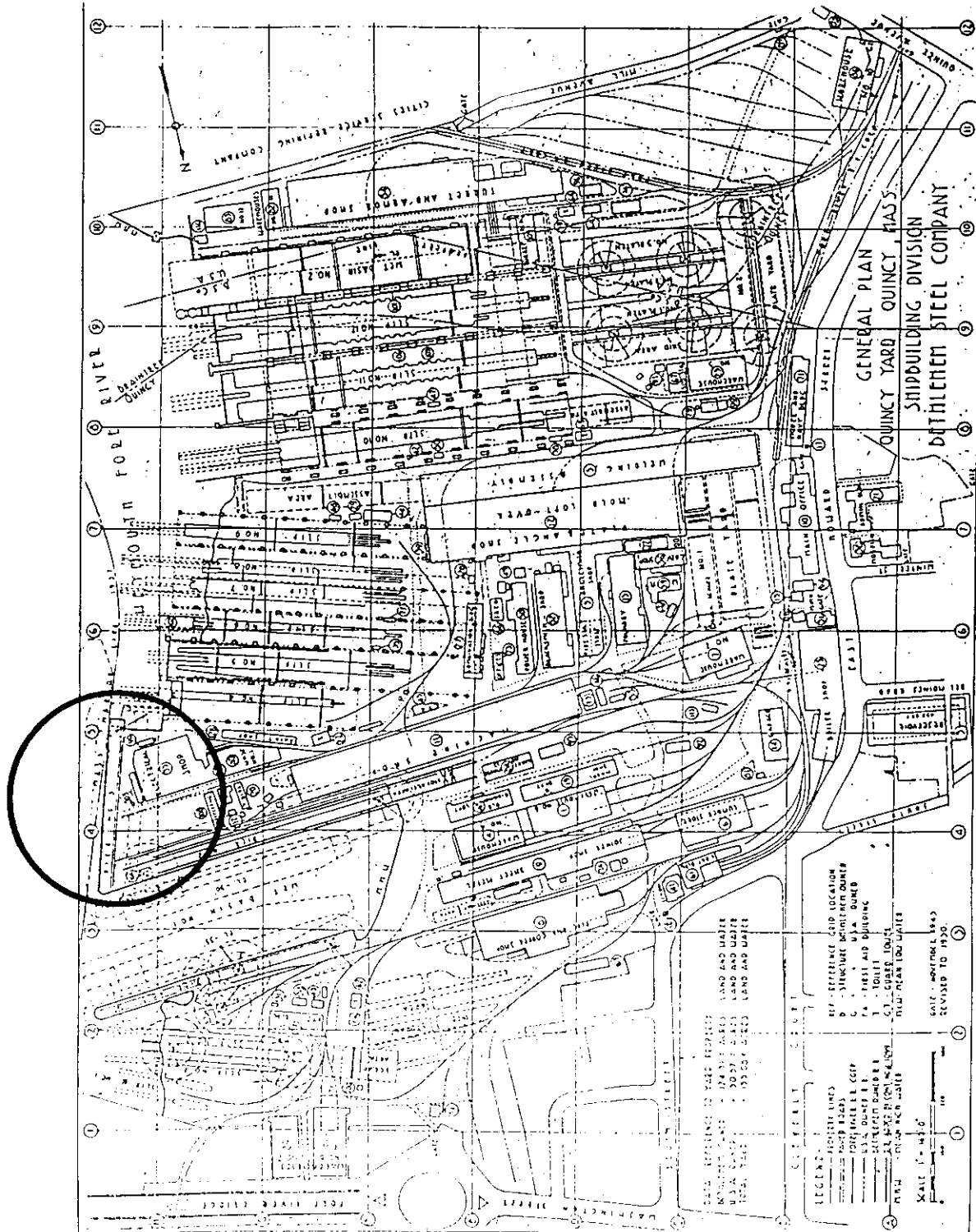
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Location Map



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Section Drawing

